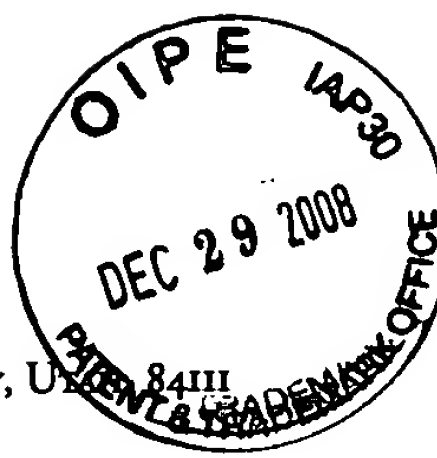




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INTELLECTUAL PROPERTY ATTORNEYS



COFC

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PATENT  
Docket No. 16585.6.2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

William B. Busa

Serial No.: 09/768,686

Filed: Jan. 24, 2001

Confirmation No.: 3892

For: *"METHOD AND SYSTEM FOR AUTOMATED  
INFERENCE CREATION OF PHYSICO-CHEMICAL  
INTERACTION KNOWLEDGE FROM DATABASES  
OF CO-OCCURENCE DATA"*

Examiner: Shubo (Joe) Zhou

Patent No.: 7,356,416 B2

Issue Date: April 8, 2008

Art Unit  
1631

Certificate  
DEC 30 2008  
of Correction

**REQUEST FOR A CERTIFICATE OF CORRECTION**  
**UNDER 37 C.F.R. § 1.323**

Attention: Certificate of Corrections Branch  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

12/29/2008 ETECLE1 00000011 7356416  
01 FC:1811

100.00 OP

Dear Commissioner:

In accordance with the provisions of 37 C.F.R. § 1.323, which implements 35 U.S.C. § 255, the Director is respectfully requested to issue a Certificate of Correction to correct mistakes in the above-identified patent. The enclosed Patent Office Form PTO/SB/44 reflects the desired corrections.

Payment in the amount of \$100.00, as set forth in 37 C.F.R. § 1.20(a) is submitted herewith to cover the costs for issuance of the requested Certificate of Correction. The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178:

DEC 30 2008

(1) any filing fees required under 37 CFR § 1.16; (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefore and charge any additional fees that may be required to Deposit Account No. 23-3178.

Dated this 23rd day of December 2008.

Respectfully submitted,

*Scott A. Woodbury*

Scott A. Woodbury  
Attorney for Applicant  
Registration No.: 55,743

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SAW:ftm  
Enclosures  
2218864v1

**CERTIFICATE OF DEPOSIT UNDER 37 C.F.R. § 1.8**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Attention: Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 26th day of December, 2008

Respectfully submitted,

*James D. Miller*

Transmitted:

REQUEST FOR A CERTIFICATE OF CORRECTION UNDER 37 C.F.R. § 1.323  
PTO Form PTO/SB/44 and check No. 101292 in the amount of \$100.00.

DEC 30 2008

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

Page 1 of 8

PATENT NO. : 7,356,416 B2  
APPLICATION NO. : 09/768,686  
ISSUE DATE : April 8, 2008  
INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

**Column 3**

Line 23, change "Bioknowledge Library" This' to --"Bioknowledge Library." This--

**Column 5**

Lines 16-17 change "checking automatically" to --automatically checking--

**Column 8**

Line 57, change "20 analysis." to --analysis.--

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Salt Lake City, Utah 84111

DEC 30 2008

# UNITED STATES PATENT AND TRADEMARK OFFICE

## CERTIFICATE OF CORRECTION

Page 2 of 8

PATENT NO. : 7,356,416 B2  
 APPLICATION NO. : 09/768,686  
 ISSUE DATE : April 8, 2008  
 INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### Column 9

Replace Table 1 with the table depicted below, wherein "0 (serotonin 10 receptor)" in the twenty-fourth entry of the table has been changed to -0 (serotonin 1C receptor)-- and multiple instances of "P1" in the forty-seventh entry of the table have been changed to -PI-

TABLE 1

UI -	98232076	Recent studies have established a role for the phosphoinositide (pi) cycle in the early
AU -	Rose L	patterning of Xenopus mesoderm. In explants, stimulation of this pathway in the absence of
AU -	Busa WB	growth factors does not induce mesoderm, but when accompanied by growth factor treatment,
TI -	Crosstalk between the phosphatidylinositol cycle and MAP kinase	simultaneous PI cycle stimulation results in profound morphological and molecular changes in the
	Signaling pathways in Xenopus mesoderm induction.	mesoderm induced by the growth factor. This suggests the possibility that the PI cycle exerts its
LA -	Eng	influence via crosstalk, by modulating some primary mesoderm-inducing pathway. Given recent
MH -	Animal	identification of mitogen-activated protein kinase (MAPK) as an intracellular mediator of some
MH -	Biological Markers	mesoderm-inducing signals, the present study explores MAPK as a potential site of PI cycle-
MH -	Ca(2+)-Calmodulin Dependent Protein Kinase/physiology	mediated crosstalk. We report that MAPK activity, like PI cycle activity, increases in intact
MH -	DNA-Binding Proteins/biosynthesis/genetics	embryos during mesoderm induction. Phosphoinositide cycle stimulation during treatment of
MH -	Embryo, Nonmammalian/physiology	explants with basic fibroblast growth factor (bFGF) synergistically increases late-phase MAPK
MH -	Embryonic Induction/physiology	activity and potentiates bFGF-induced expression of Xbra, a MAPK-dependent mesodermal
MH -	Fibroblast Growth Factor, Basic/physiology	marker.
MH -	Gene Expression Regulation, Developmental/drug effects	Department of Biology, The Johns Hopkins University, Baltimore, MD
MH -	Mesoderm/drug effects/physiology	21218, U.S.A.
MH -	Microinjections	0009572365
MH -	Phosphatidylinositol/physiology	1998/05/08 02:03
MH -	Receptors, Serotonin/drug effects/genetics	1998/05/08 02:03
MH -	Recombinant Fusion Proteins/physiology	Dev Growth Differ 1998 Apr;40(2):231-41
MH -	Serotonin/pharmacology	
MH -	Signal Transduction/drug effects/physiology	
MH -	Transcription Factors/biosynthesis/genetics	
MH -	Xenopus laevis/embryology	
RN -	EC 2.7.10.- (Ca(2+)-Calmodulin Dependent Protein Kinase)	
RN -	0 (serotonin 1C receptor)	
RN -	0 (Biological Markers)	
RN -	0 (Brachyury protein)	
RN -	0 (DNA-Binding Proteins)	
RN -	0 (Fibroblast Growth Factor, Basic)	
RN -	0 (Phosphatidylinositol)	
RN -	0 (Receptors, Serotonin)	
RN -	0 (Recombinant Fusion Proteins)	
RN -	0 (Transcription Factors)	
RN -	50-67-9 (Serotonin)	
PT -	JOURNAL ARTICLE	
DA -	19980706	
DP -	1998 Apr	
IS -	0012-1592	
TA -	Dev Growth Differ	
PG -	231-41	
SB -	M	
CY -	JAPAN	
IP -	2	
VI -	40	
JC -	E7Y	
AA -	Author	
EM -	199809	
AB -	Recent studies have established a role for the phosphoinositide (pi) cycle in the early	
	patterning of Xenopus mesoderm. In explants, stimulation of this pathway in the absence of	
	growth factors does not induce mesoderm, but when accompanied by growth factor treatment,	
	simultaneous PI cycle stimulation results in profound morphological and molecular changes in the	
	mesoderm induced by the growth factor. This suggests the possibility that the PI cycle exerts its	
	influence via crosstalk, by modulating some primary mesoderm-inducing pathway. Given recent	
	identification of mitogen-activated protein kinase (MAPK) as an intracellular mediator of some	
	mesoderm-inducing signals, the present study explores MAPK as a potential site of PI cycle-	
	mediated crosstalk. We report that MAPK activity, like PI cycle activity, increases in intact	
	embryos during mesoderm induction. Phosphoinositide cycle stimulation during treatment of	
	explants with basic fibroblast growth factor (bFGF) synergistically increases late-phase MAPK	
	activity and potentiates bFGF-induced expression of Xbra, a MAPK-dependent mesodermal	
	marker.	
AD -	Department of Biology, The Johns Hopkins University, Baltimore, MD	
	21218, U.S.A.	
PMID -	0009572365	
EDAT -	1998/05/08 02:03	
MHDA -	1998/05/08 02:03	
SO -	Dev Growth Differ 1998 Apr;40(2):231-41	

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DEC 30 2008

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 3 of 8

PATENT NO. : 7,356,416 B2  
 APPLICATION NO. : 09/768,686  
 ISSUE DATE : April 8, 2008  
 INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

**Column 11**

Line 10, change "in included the set" to --included in the set--  
 Line 51, change "as to" to --to--

**Column 14**

Line 25, change "84" to --82--

**Column 16**

Line 42, change " $P(\neg A | \neg B) a$ " to  $- P(\neg A | \neg B) \equiv a$ --  
 Line 64, change "network 82" to --network 80--

**Column 18**

Line 51, change "molecules names" to --molecule names--

**Column 19**

Line 26, change "Node F," to --Node F 124,--  
 Line 29, change "122" to --124--

**Column 20**

Replace Table 4 with the table depicted below, wherein "WHERE Chem 1 = 'A'" has been changed to --WHERE Chem\_1 = 'A'--

TABLE 4

---

```

SELECT Chem_2, Likelihood FROM Chem_Pairs
WHERE Chem_1 = 'F' AND Chem_2 IN
(SELECT Chem_2 FROM Chem_Pairs
WHERE Chem_1 = 'D' AND Chem_2 IN
(SELECT Chem_2 FROM Chem_Pairs
WHERE Chem_1 = 'A'))
    
```

---

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**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

Page 4 of 8

PATENT NO. : 7,356,416 B2  
APPLICATION NO. : 09/768,686  
ISSUE DATE : April 8, 2008  
INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

**Column 21**

Line 14, change "molecules names" to --molecule names--

Replace Table 5 with the table depicted below, wherein: "WHERE Chem\_1 = '0' AND Chem\_2 IN" has been changed to --WHERE Chem\_1 = 'D' AND Chem\_2 IN-- and the second "(SELECT Chem\_2 FROM Chem\_Pairs" has been changed to --(SELECT Chem\_2 FROM Chem\_Pairs)--

TABLE 5

<div style="border-top: 1px solid black; border-bottom: 1px solid black; padding: 5px 0;">SELECT Chem_2, Likelihood FROM Chem_Pairs WHERE Chem_1 = 'D' AND Chem_2 IN (SELECT Chem_2 FROM Chem_Pairs WHERE Chem_1 = 'A')</div>	And	<div style="border-top: 1px solid black; border-bottom: 1px solid black; padding: 5px 0;">SELECT Chem_2, Likelihood FROM Chem_Pairs WHERE Chem_1 = 'F' AND Chem_2 IN (SELECT Chem_2 FROM Chem_Pairs)</div>
---	-----	--

**Column 23**

Line 6, change "signal transduction.", ' to --"signal transduction,"--

**Column 24**

Line 50, change "construct" to --to construct--

Line 61, change "biological" to --checking biological--

**Column 25**

Line 10, change "embodiments in" to --embodiments--

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

Page 5 of 8

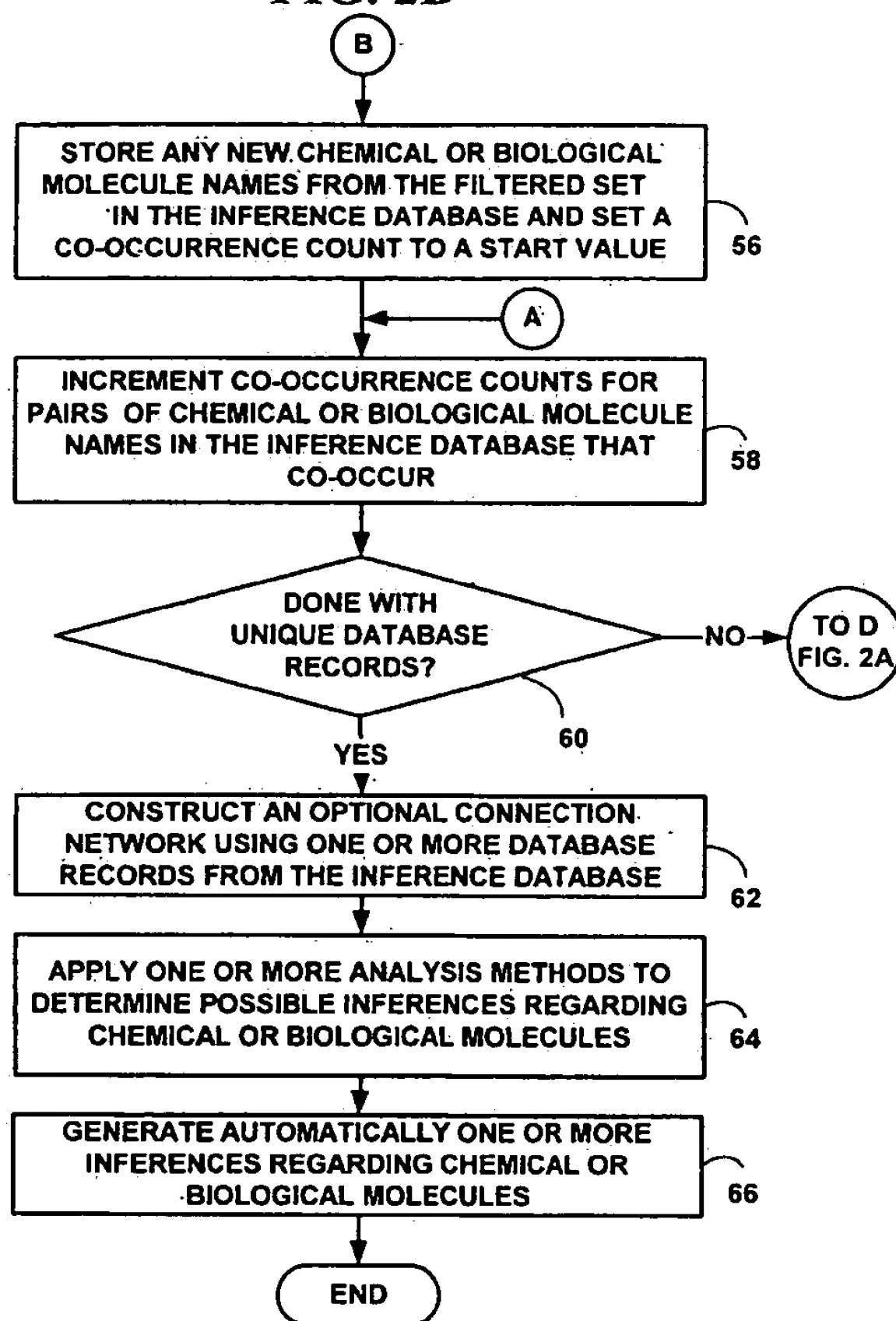
PATENT NO. : 7,356,416 B2  
APPLICATION NO. : 09/768,686  
ISSUE DATE : April 8, 2008  
INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Drawings

Sheet 3, replace Fig. 2B with the figure depicted below, wherein in step 56 "IN THE IN THE" has been changed to -IN THE-

FIG. 2B



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# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

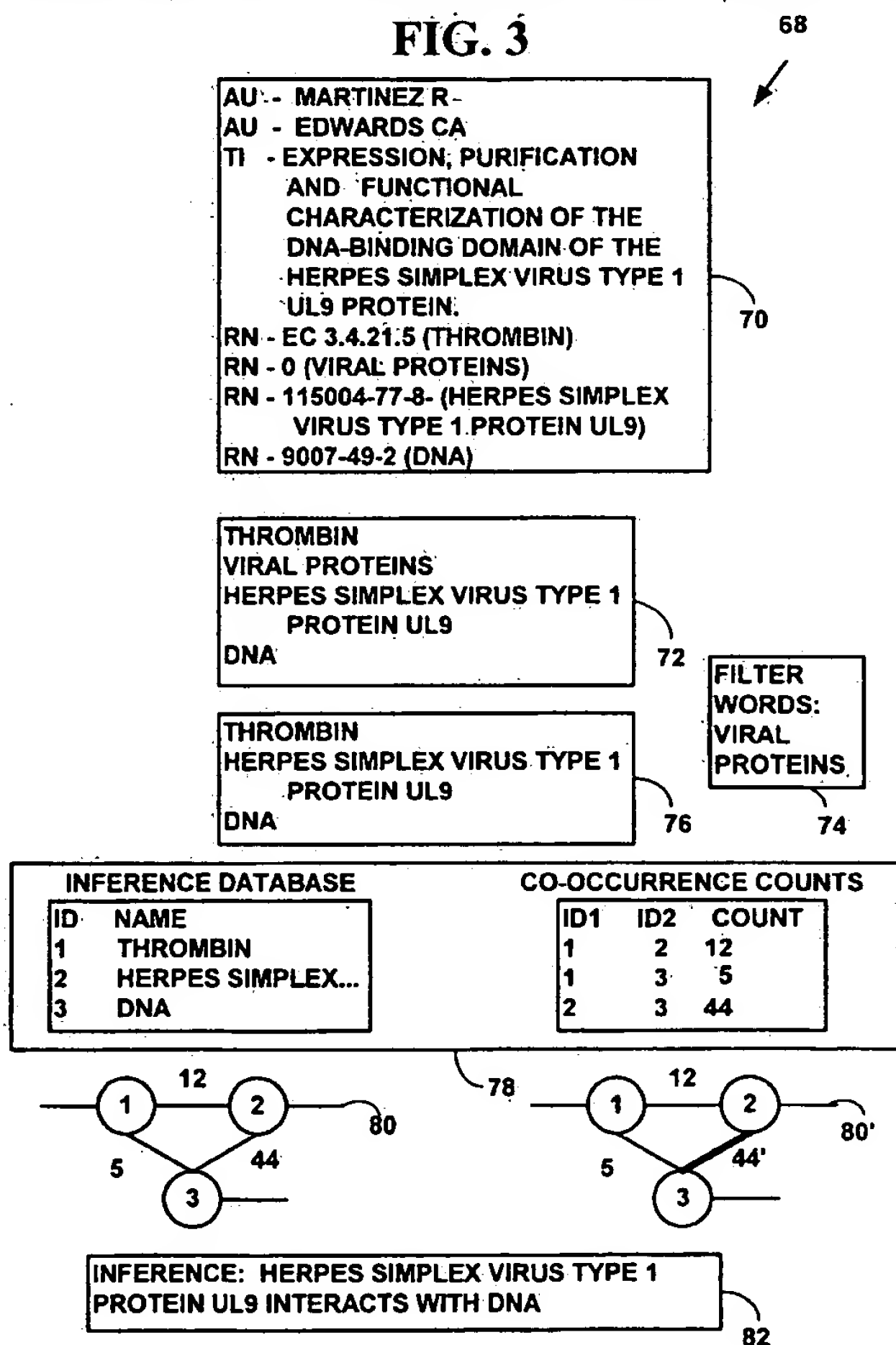
Page 6 of 8

PATENT NO. : 7,356,416 B2  
 APPLICATION NO. : 09/768,686  
 ISSUE DATE : April 8, 2008  
 INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Sheet 4, replace Fig. 3 with the figure depicted below, wherein in box 78, "4" has been changed to -5-

**FIG. 3**



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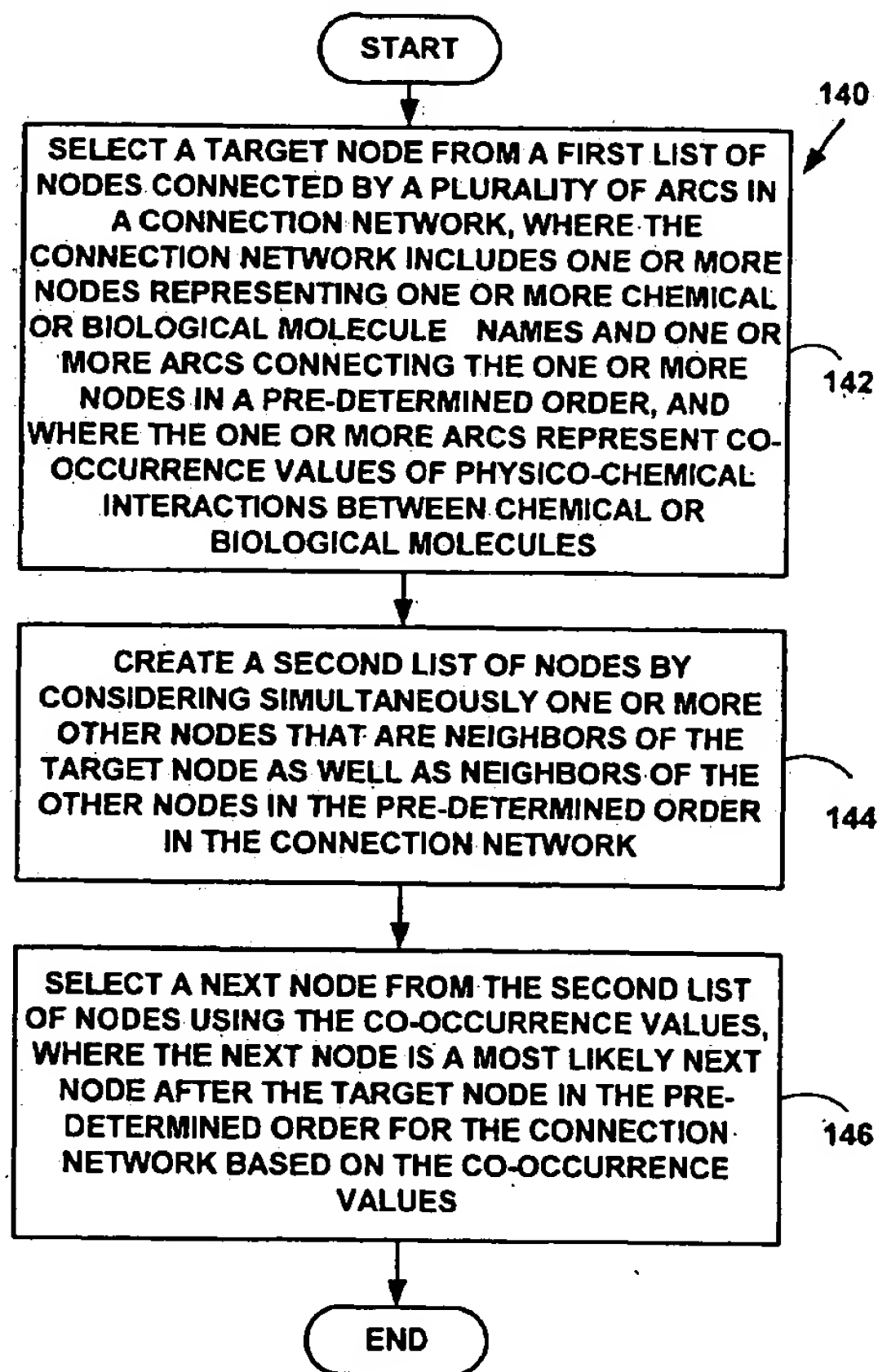
Page 7 of 8

PATENT NO. : 7,356,416 B2  
APPLICATION NO. : 09/768,686  
ISSUE DATE : April 8, 2008  
INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Sheet 8, replace Fig. 7 with the figure depicted below, wherein in step 142 "MOLECULES NAMES" has been changed to --MOLECULE NAMES--

FIG. 7



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CERTIFICATE OF CORRECTION

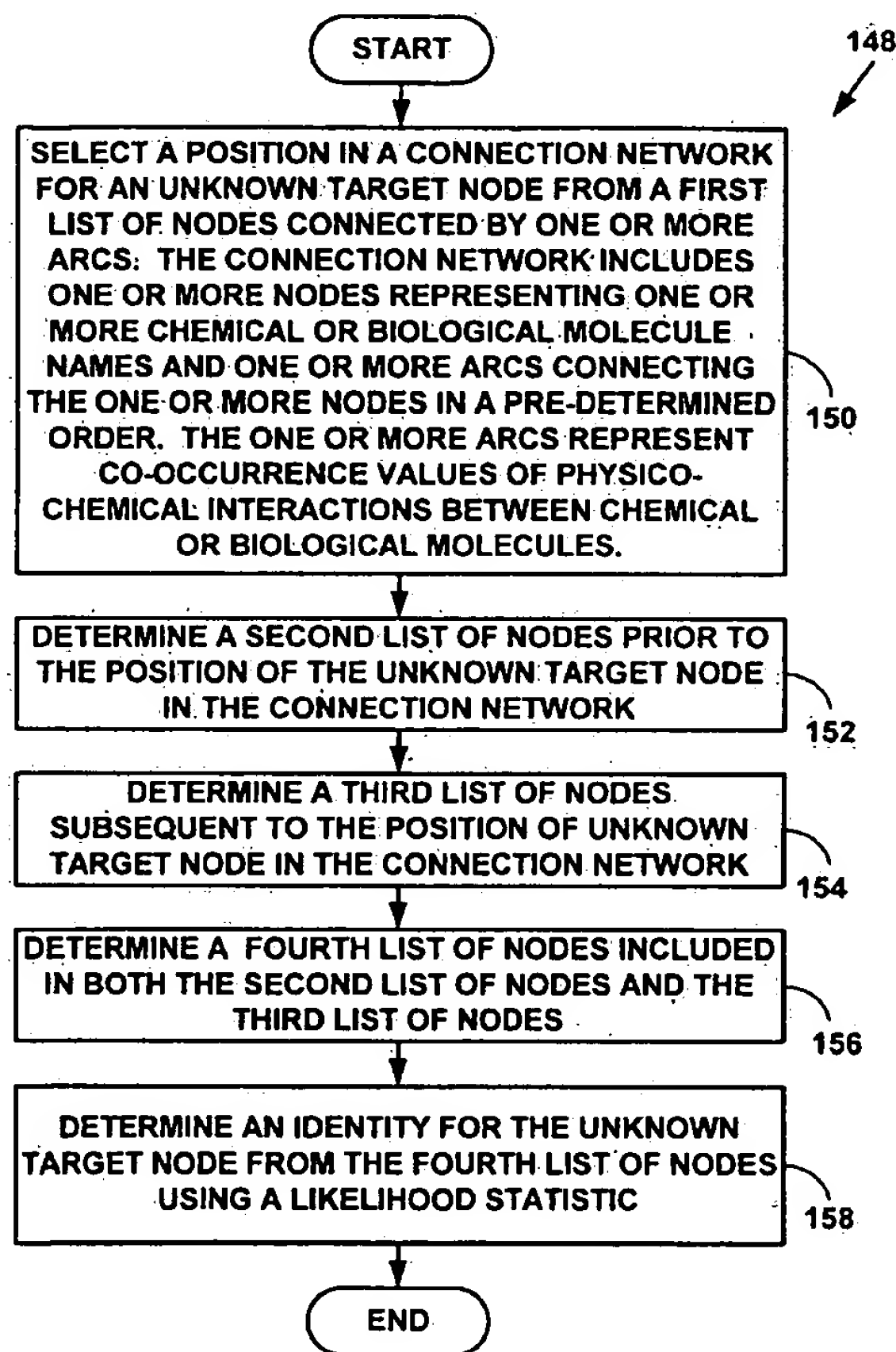
Page 8 of 8

PATENT NO. : 7,356,416 B2  
APPLICATION NO. : 09/768,686  
ISSUE DATE : April 8, 2008  
INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Sheet 9, replace Fig. 8 with the figure depicted below, wherein in step 150, "MOLECULES NAMES" has been changed to --MOLECULE NAMES--

FIG. 8



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PATENT  
Docket No. 16585.6.2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

William B. Busa

Serial No.: 09/768,686

Filed: Jan. 24, 2001

Confirmation No.: 3892

For: *"METHOD AND SYSTEM FOR AUTOMATED  
INFERENCE CREATION OF PHYSICO-CHEMICAL  
INTERACTION KNOWLEDGE FROM DATABASES  
OF CO-OCCURENCE DATA"*

Examiner: Shubo (Joe) Zhou

Patent No.: 7,356,416 B2

Issue Date: April 8, 2008

Art Unit  
1631

**REQUEST FOR A CERTIFICATE OF CORRECTION**  
**UNDER 37 C.F.R. § 1.323**

Attention: Certificate of Corrections Branch  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Commissioner:

In accordance with the provisions of 37 C.F.R. § 1.323, which implements 35 U.S.C. § 255, the Director is respectfully requested to issue a Certificate of Correction to correct mistakes in the above-identified patent. The enclosed Patent Office Form PTO/SB/44 reflects the desired corrections.

Payment in the amount of \$100.00, as set forth in 37 C.F.R. § 1.20(a) is submitted herewith to cover the costs for issuance of the requested Certificate of Correction. The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178:

DEC 30 2008

(1) any filing fees required under 37 CFR § 1.16; (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefore and charge any additional fees that may be required to Deposit Account No. 23-3178.

Dated this 23rd day of December 2008.

Respectfully submitted,

*Scott A. Woodbury*

Scott A. Woodbury  
Attorney for Applicant  
Registration No.: 55,743

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Salt Lake City, UT 84111  
Phone: 801-533-9800  
Fax: 801-328-1707

SAW:ftm  
Enclosures  
2218864v1

**CERTIFICATE OF DEPOSIT UNDER 37 C.F.R. § 1.8**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Attention: Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 26th day of December, 2008

Respectfully submitted,

*[Signature]*

Transmitted:

REQUEST FOR A CERTIFICATE OF CORRECTION UNDER 37 C.F.R. § 1.323  
PTO Form PTO/SB/44 and check No. 101292 in the amount of \$100.00.

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

Page 1 of 8

PATENT NO. : 7,356,416 B2  
APPLICATION NO. : 09/768,686  
ISSUE DATE : April 8, 2008  
INVENTOR(S) : William B. Busa

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**Column 3**

Line 23, change ““Bioknowledge Library” This’ to --“Bioknowledge Library.” This--

**Column 5**

Lines 16-17 change “checking automatically” to --automatically checking--

**Column 8**

Line 57, change “20 analysis.” to --analysis.--

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

Page 2 of 8

PATENT NO. : 7,356,416 B2  
APPLICATION NO. : 09/768,686  
ISSUE DATE : April 8, 2008  
INVENTOR(S) : William B. Busa

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Column 9

Replace Table 1 with the table depicted below, wherein "0 (serotonin 10 receptor)" in the twenty-fourth entry of the table has been changed to --0 (serotonin 1C receptor)-- and multiple instances of "P1" in the forty-seventh entry of the table have been changed to --PI--

TABLE 1

UI -	98232076	
AU -	Rose L	
AU -	Busa WB	
TI -	Crosstalk between the phosphatidylinositol cycle and MAP kinase signaling pathways in Xenopus mesoderm induction.	
LA -	Eng	
MH -	Animal	
MH -	Biological Markers	
MH -	Ca(2+)-Calmodulin Dependent Protein Kinase/*physiology	
MH -	DNA-Binding Proteins/biosynthesis/genetics	
MH -	Embryo, Nonmammalian/physiology	
MH -	Embryonic Induction/*physiology	
MH -	Fibroblast Growth Factor, Basic/*pharmacology	
MH -	Gene Expression Regulation, Developmental/drug effects	
MH -	Mesoderm/drug effects/*physiology	
MH -	Microinjections	
MH -	Phosphatidylinositol/*physiology	
MH -	Receptors, Serotonin/drug effects/genetics	
MH -	Recombinant Fusion Proteins/physiology	
MH -	Serotonin/pharmacology	
MH -	Signal Transduction/drug effects/*physiology	
MH -	Transcription Factors/biosynthesis/genetics	
MH -	Xenopus laevis/*embryology	
RN -	EC 2.7.10.- (Ca(2+)-Calmodulin Dependent Protein Kinase)	
RN -	0 (serotonin 1C receptor)	
RN -	0 (Biological Markers)	
RN -	0 (Bradykinin protein)	
RN -	0 (DNA-Binding Proteins)	
RN -	0 (Fibroblast Growth Factor, Basic)	
RN -	0 (Phosphatidylinositol)	
RN -	0 (Receptors, Serotonin)	
RN -	0 (Recombinant Fusion Proteins)	
RN -	0 (Transcription Factors)	
RN -	50-67-9 (Serotonin)	
PT -	JOURNAL ARTICLE	
DA -	19980706	
DP -	1998 Apr	
IS -	0012-1592	
TA -	Dev Growth Differ	
PG -	231-41	
SB -	M	
CY -	JAPAN	
IP -	2	
VI -	40	
JC -	E7Y	
AA -	Author	
EM -	199809	
AB -	Recent studies have established a role for the phosphoinositide (pi) cycle in the early patterning of Xenopus mesoderm. In explants, stimulation of this pathway in the absence of growth factors does not induce mesoderm, but when accompanied by growth factor treatment, simultaneous PI cycle stimulation results in profound morphological and molecular changes in the mesoderm induced by the growth factor. This suggests the possibility that the PI cycle exerts its influence via crosstalk, by modulating some primary mesoderm-inducing pathway. Given recent identification of mitogen-activated protein kinase (MAPK) as an intracellular mediator of some mesoderm-inducing signals, the present study explores MAPK as a potential site of PI cycle-mediated crosstalk. We report that MAPK activity, like PI cycle activity, increases in intact embryos during mesoderm induction. Phosphoinositide cycle stimulation during treatment of explants with basic fibroblast growth factor (bFGF) synergistically increases late-phase MAPK activity and potentiates bFGF-induced expression of Xbra, a MAPK-dependent mesodermal marker.	
AD -	Department of Biology, The Johns Hopkins University, Baltimore, MD	
	21218, U.S.A.	
PMID -	0009572365	
EDAT -	1998/05/08 02:03	
MHDA -	1998/05/08 02:03	
SO -	Dev Growth Differ 1998 Apr;40(2):231-41	

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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

Page 3 of 8

PATENT NO. : 7,356,416 B2  
APPLICATION NO. : 09/768,686  
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INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 11

Line 10, change "in included the set" to --included in the set--  
Line 51, change "as to" to --to--

Column 14

Line 25, change "84" to --82--

Column 16

Line 42, change " $P(\neg A | \neg B) a$ " to --  $P(\neg A | \neg B) \equiv a$  --  
Line 64, change "network 82" to --network 80--

Column 18

Line 51, change "molecules names" to --molecule names--

Column 19

Line 26, change "Node F," to --Node F 124,--  
Line 29, change "122" to --124--

Column 20

Replace Table 4 with the table depicted below, wherein "WHERE Chem\_1 = 'A'" has been changed to --WHERE Chem\_1 = 'A'--

TABLE 4

---

```
SELECT Chem_2, Likelihood FROM Chem_Pairs
WHERE Chem_1 = 'F' AND Chem_2 IN
(SELECT Chem_2 FROM Chem_Pairs
WHERE Chem_1 = 'D' AND Chem_2 IN
(SELECT Chem_2 FROM Chem_Pairs
WHERE Chem_1 = 'A'))
```

---

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# UNITED STATES PATENT AND TRADEMARK OFFICE

## CERTIFICATE OF CORRECTION

Page 4 of 8

PATENT NO. : 7,356,416 B2  
 APPLICATION NO. : 09/768,686  
 ISSUE DATE : April 8, 2008  
 INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

**Column 21**

Line 14, change "molecules names" to --molecule names--

Replace Table 5 with the table depicted below, wherein "WHERE Chem\_1 = '0' AND Chem\_2 IN" has been changed to --WHERE Chem\_1 = 'D' AND Chem\_2 IN-- and the second "(SELECT Chem\_2 FROM Chem\_Pairs" has been changed to --(SELECT Chem\_2 FROM Chem\_Pairs)--

TABLE 5

	SELECT Chem_2, Likelihood FROM Chem_Pairs
	WHERE Chem_1 = 'D' AND Chem_2 IN
	(SELECT Chem_2 FROM Chem_Pairs
	WHERE Chem_1 = 'A')
And	
	SELECT Chem_2, Likelihood FROM Chem_Pairs
	WHERE Chem_1 = 'F' AND Chem_2 IN
	(SELECT Chem_2 FROM Chem_Pairs)

**Column 23**

Line 6, change "signal transduction.", ' to --"signal transduction,"--

**Column 24**

Line 50, change "construct" to --to construct--

Line 61, change "biological" to --checking biological--

**Column 25**

Line 10, change "embodiments in" to --embodiments--

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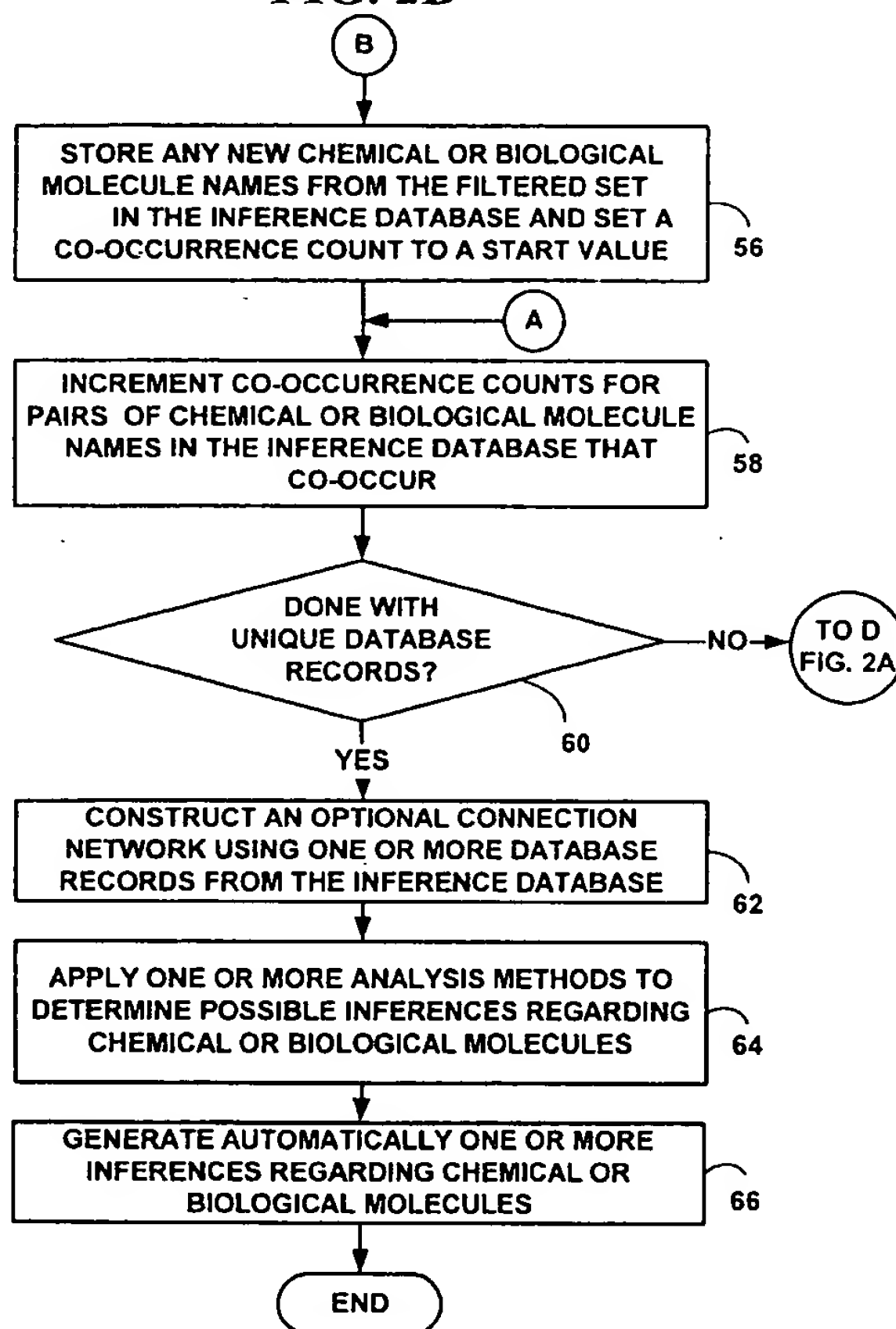
PATENT NO. : 7,356,416 B2  
APPLICATION NO. : 09/768,686  
ISSUE DATE : April 8, 2008  
INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Drawings

Sheet 3, replace Fig. 2B with the figure depicted below, wherein in step 56 "IN THE IN THE" has been changed to --IN THE--

FIG. 2B



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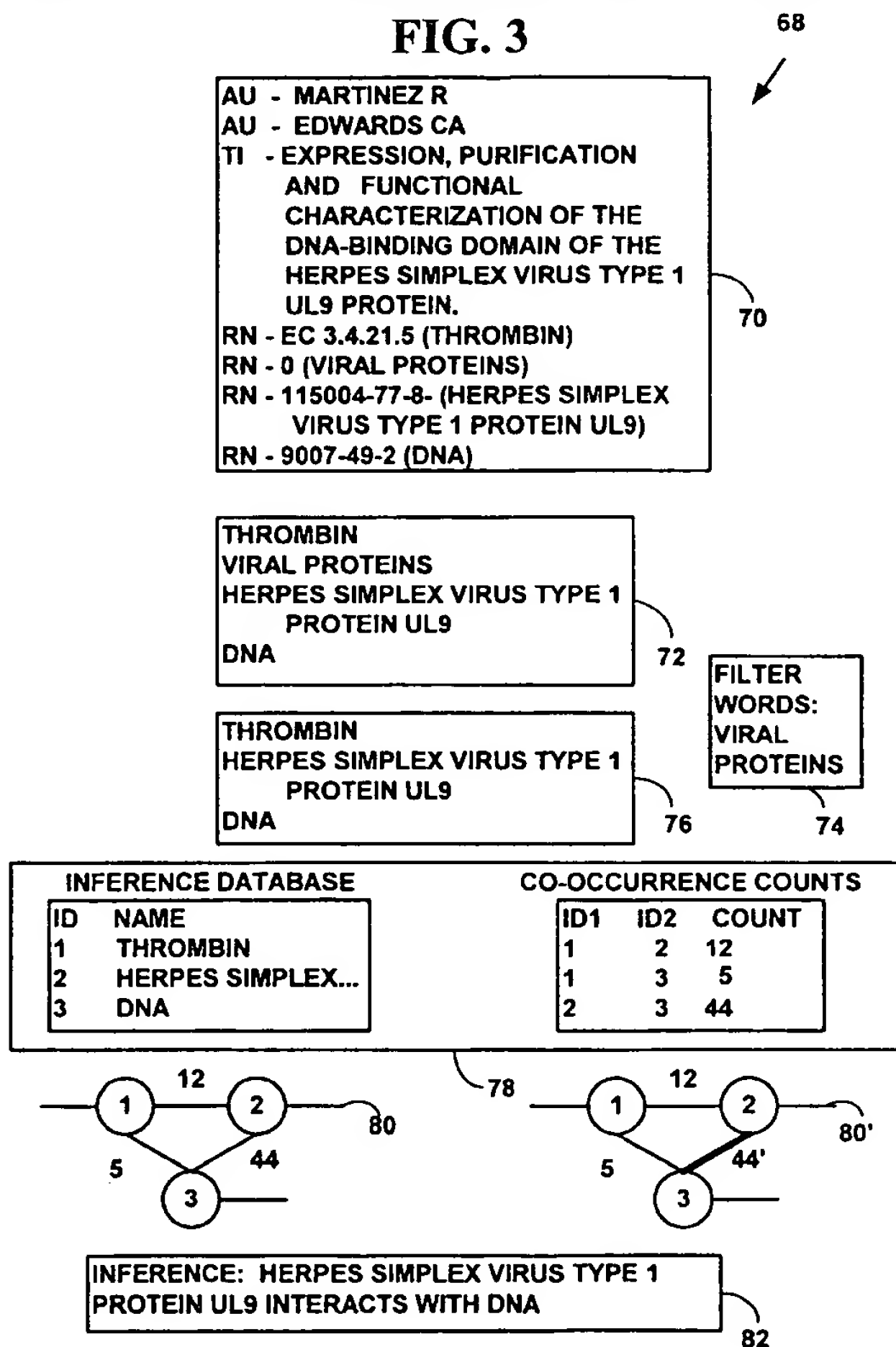
Page 6 of 8

PATENT NO. : 7,356,416 B2  
 APPLICATION NO. : 09/768,686  
 ISSUE DATE : April 8, 2008  
 INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Sheet 4, replace Fig. 3 with the figure depicted below, wherein in box 78, "4" has been changed to --5--

**FIG. 3**



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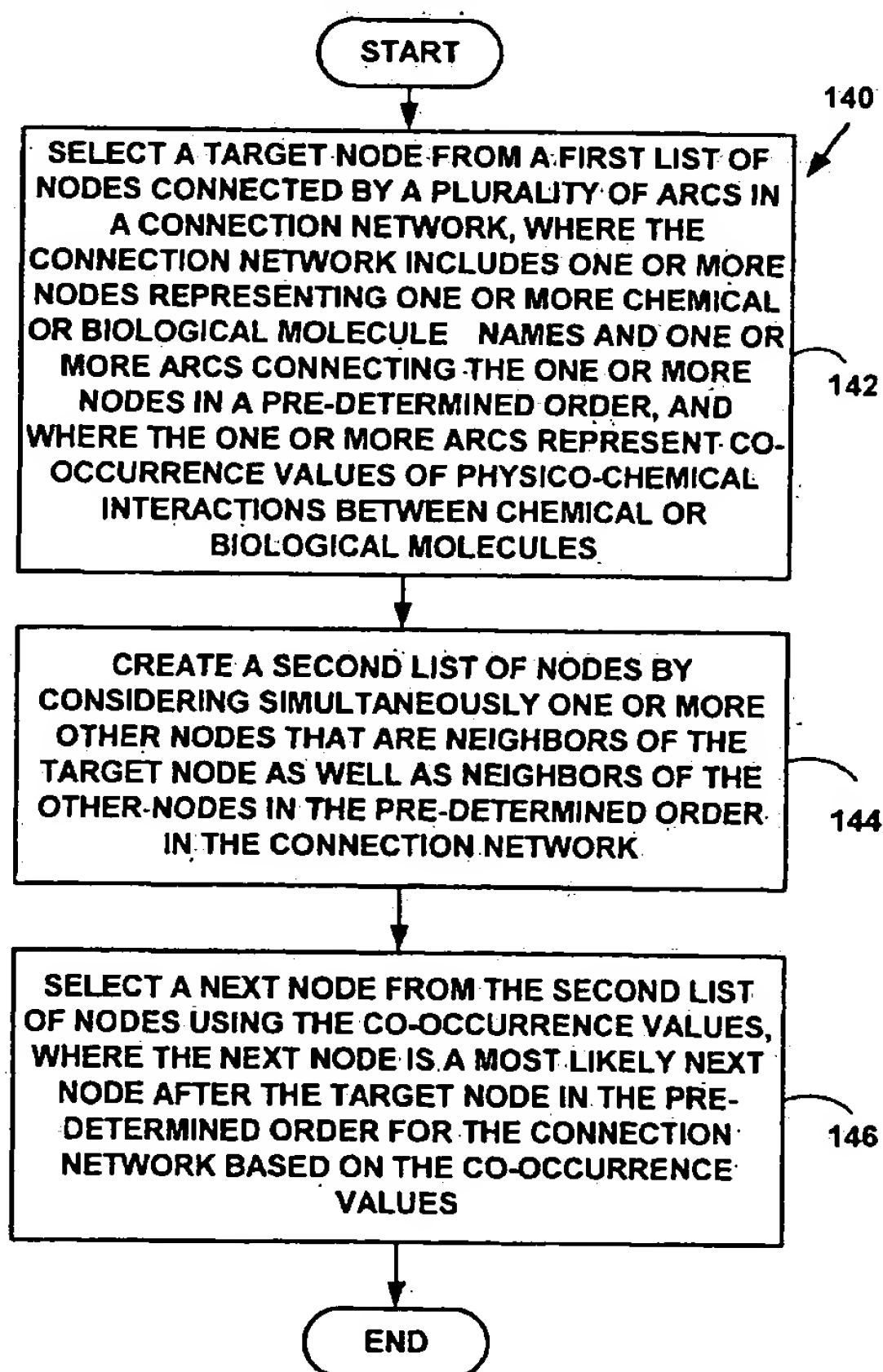
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PATENT NO. : 7,356,416 B2  
APPLICATION NO. : 09/768,686  
ISSUE DATE : April 8, 2008  
INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Sheet 8, replace Fig. 7 with the figure depicted below, wherein in step 142 "MOLECULES NAMES" has been changed to -MOLECULE NAMES-

**FIG. 7**



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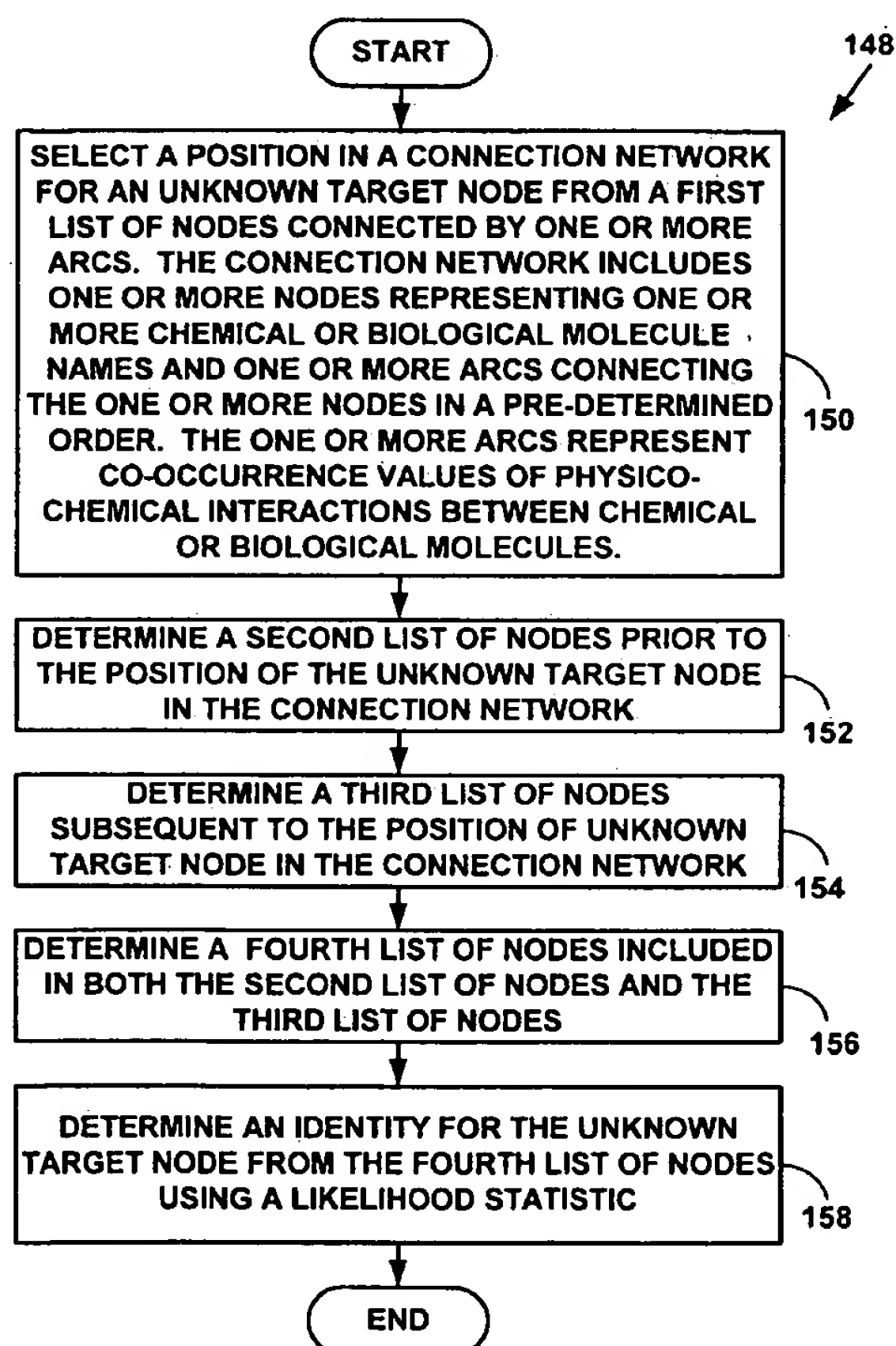
Page 8 of 8

PATENT NO. : 7,356,416 B2  
APPLICATION NO. : 09/768,686  
ISSUE DATE : April 8, 2008  
INVENTOR(S) : William B. Busa

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Sheet 9, replace Fig. 8 with the figure depicted below, wherein in step 150 "MOLECULES NAMES" has been changed to --MOLECULE NAMES--

**FIG. 8**



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